

Figure1. Insulin / glycine precipitated in 2-propanol

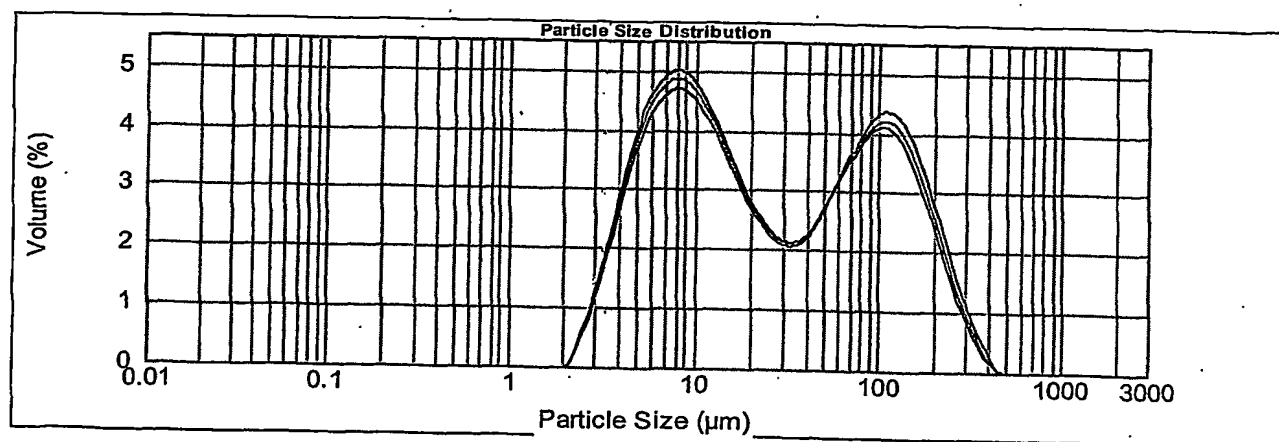


Figure2. chymotrypsin / alanine precipitated in 2-propanol

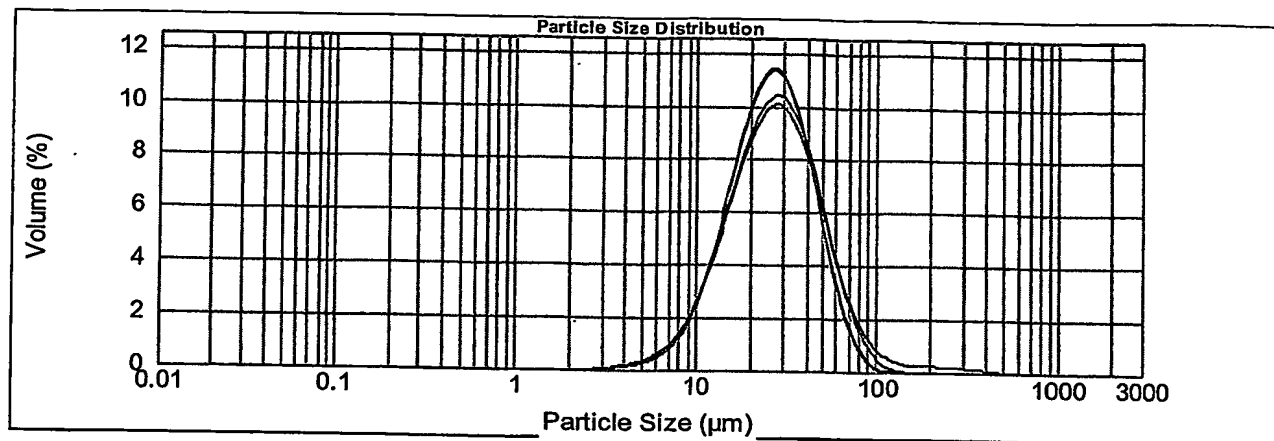


Figure 3. 15mg chymotrypsin was dissolved in 3ml of 50 %saturated DL valine solution. 6 ml of the aqueous solution was precipitated in 35 ml of DL valine saturated 2-propanol. The particles were dried using Millipore filtration system.

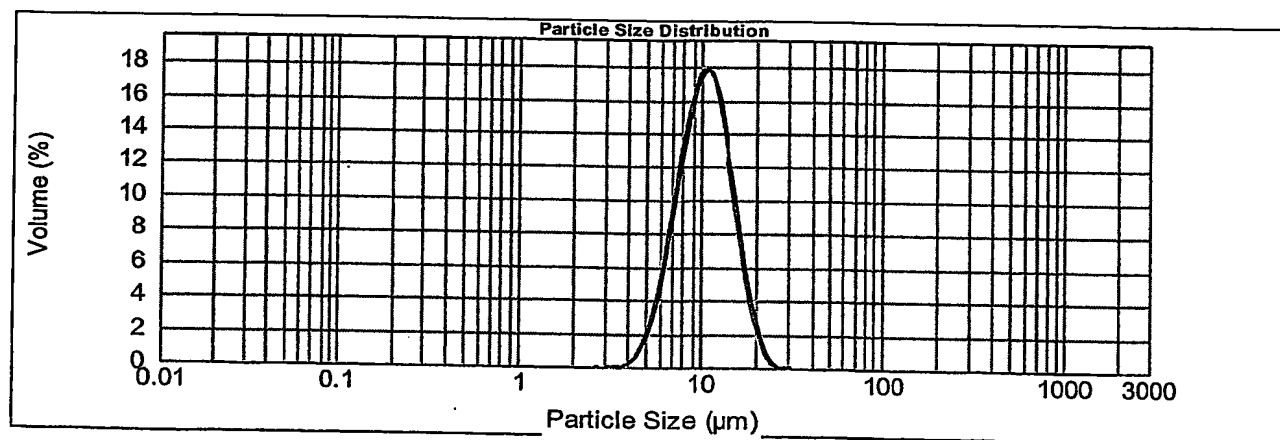


Figure 4. 0.2ml of saturated DL valine solution was precipitated in 60ml unsaturated 2-propanol using Hamilton syringe in mastersizer sample chamber, with a stirrer speed = 2000rpm. Particles formed inside Mastersizer and were directly measured.

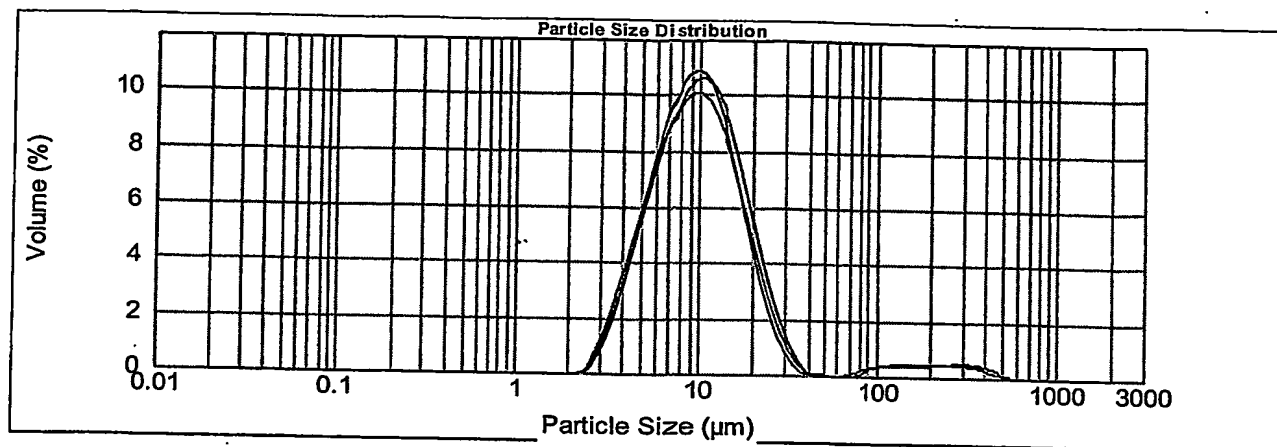


Figure 5.. insulin / L-histidine precipitated in 2-propanol

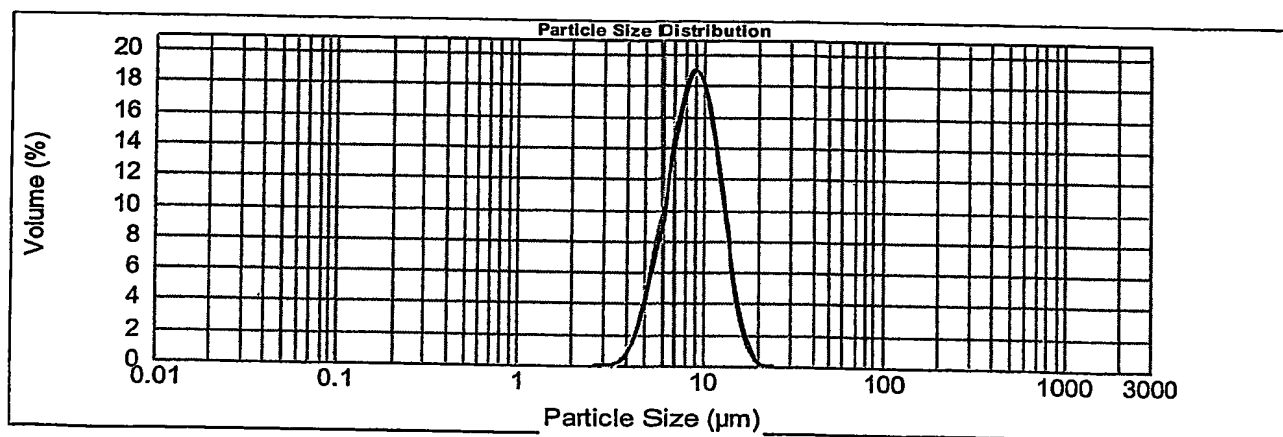


Figure 6. 0.2ml of saturated DL valine precipitated in 60ml unsaturated 2-propanol in mastersizer sample chamber, with a stirrer speed = 1500rpm. Particles formed inside Mastersizer and were directly measured.

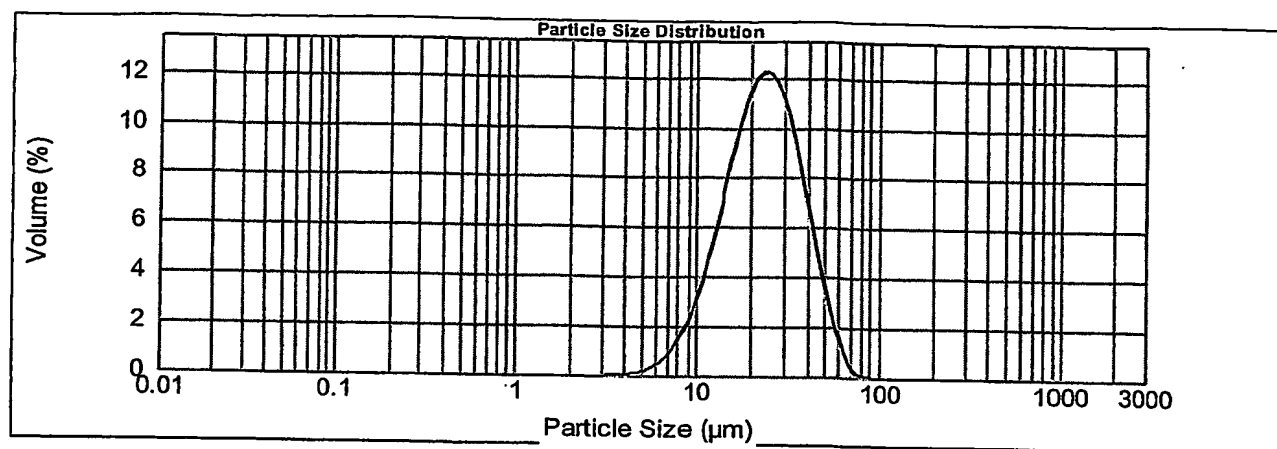


Figure 7. 0.6ml L-glutamine saturated solution precipitated in 6ml L-glutamine saturated 2-propanol solution using 5ml pipette under fast stirring. The particles were dried using Millipore filtration system.

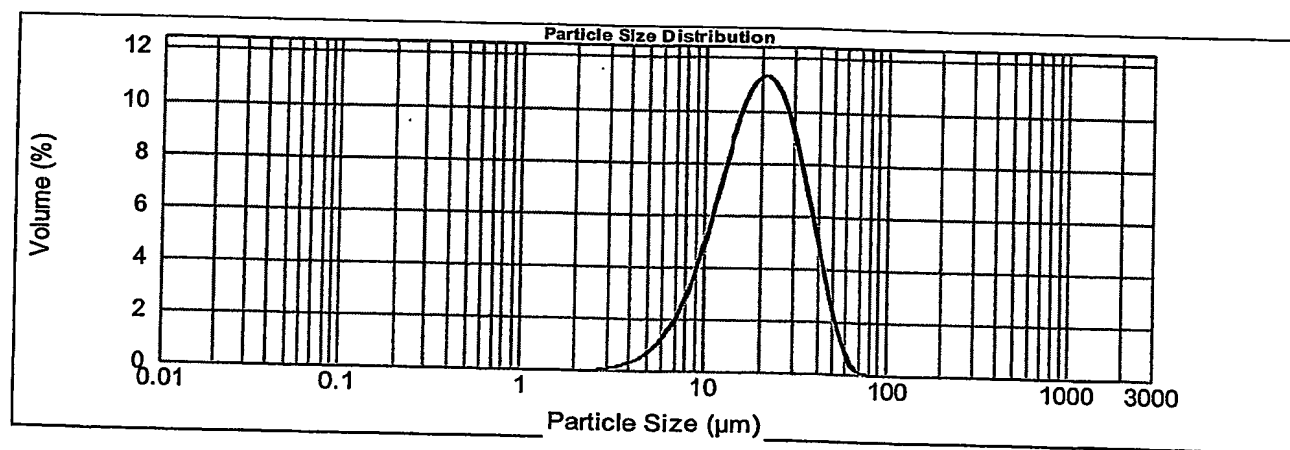


Figure 8. 0.6ml L-glutamine saturated solution precipitated in 6ml of L-glutamine saturated 2-propanol solution using small syringe pump under fast stirring. The particles were dried using Millipore filtration system.

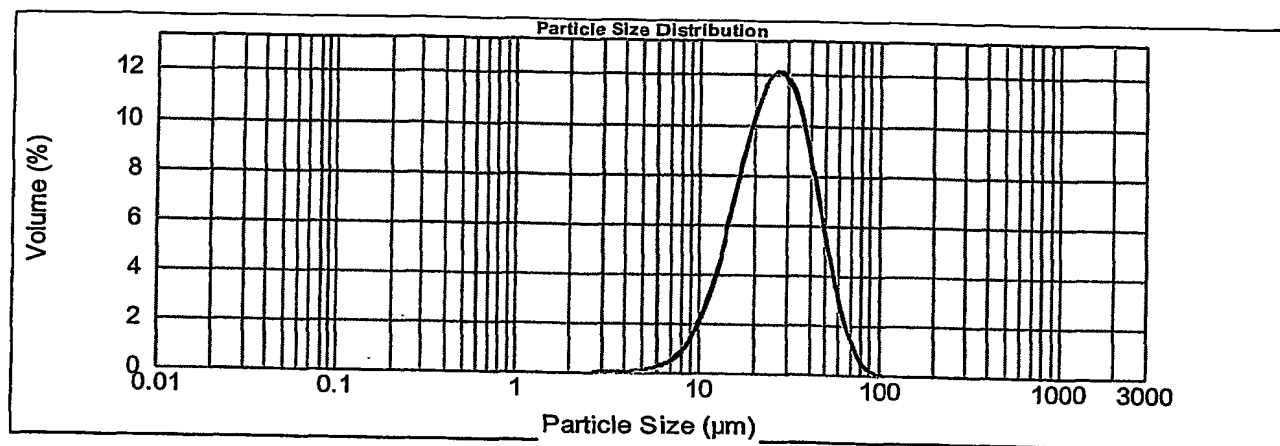


Figure 9.5%loading albumin /L-glutamine prec in 2-prop, medium stirring
1mg of albumin dissolved in 0.6ml L-glutamine saturated solution. 0.5ml of this solution was precipitated into 5ml 2-propanol saturated with L-glutamine using syringe pump under medium stirring. The particles were dried using Millipore filtration system.

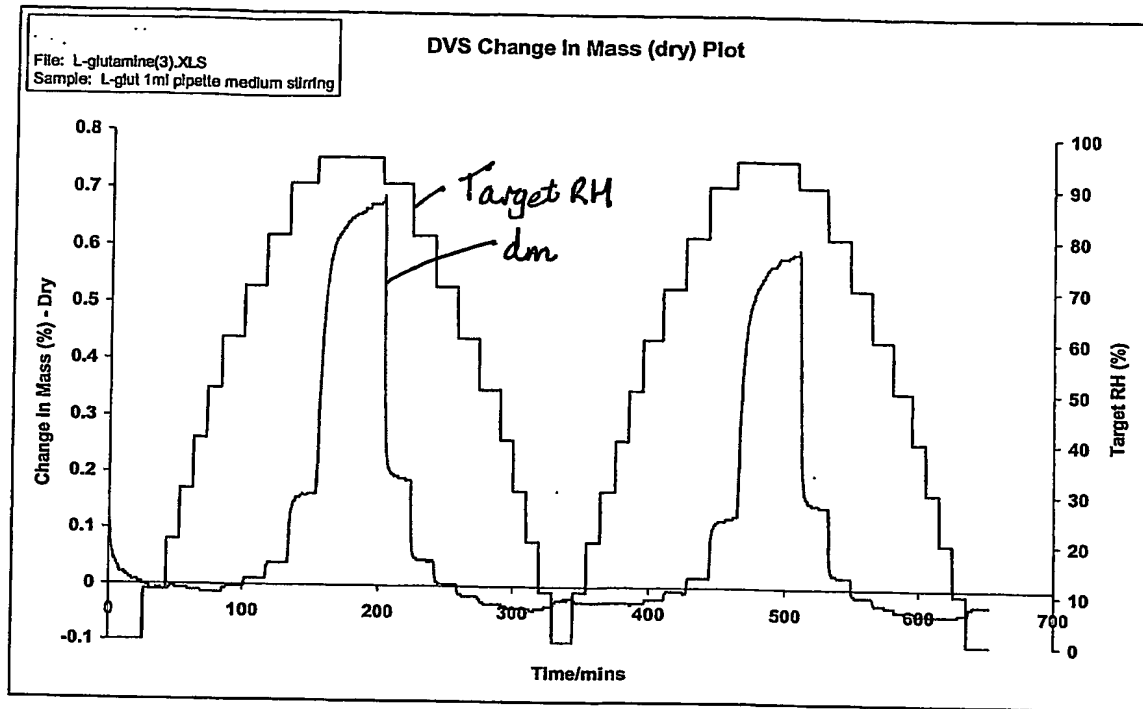


Figure 10

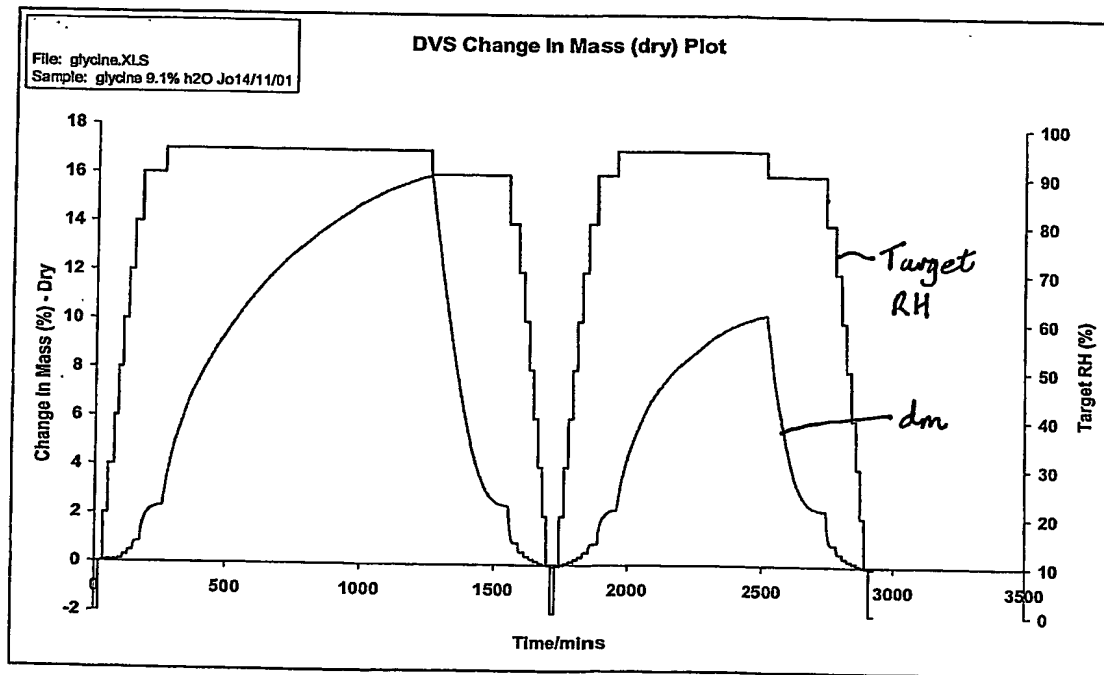


Figure 11

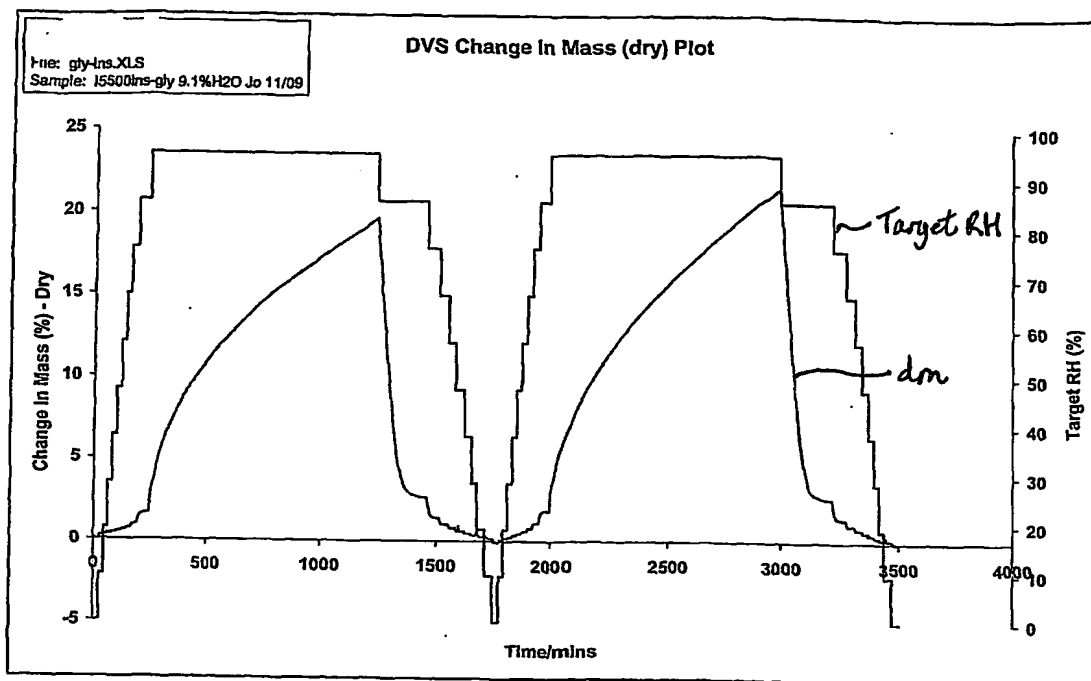


Figure 12

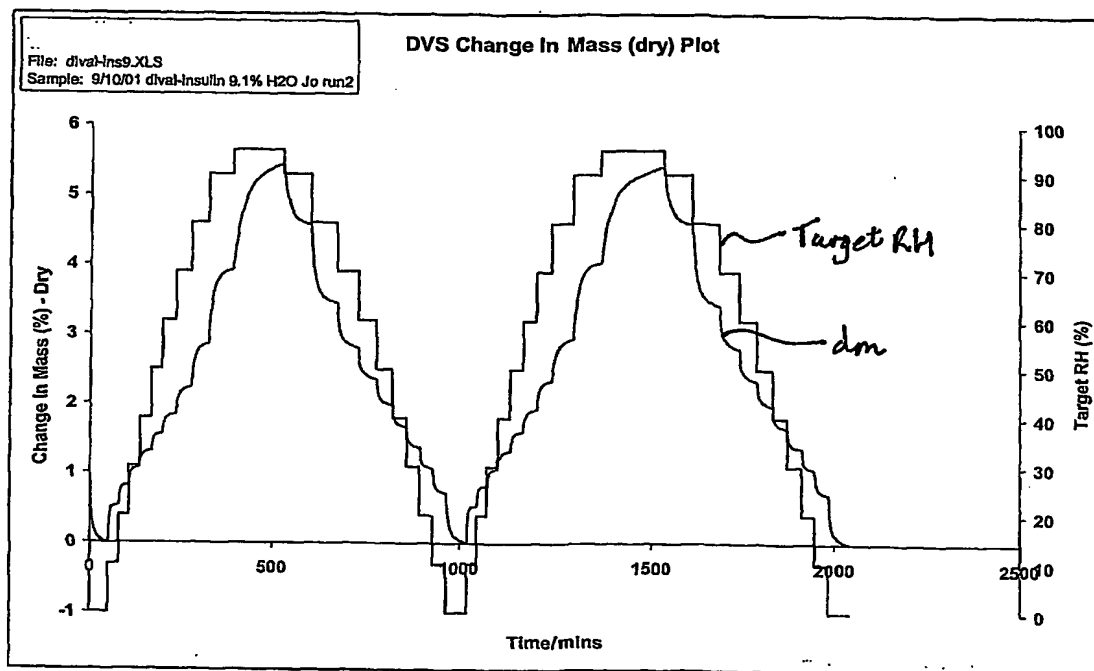


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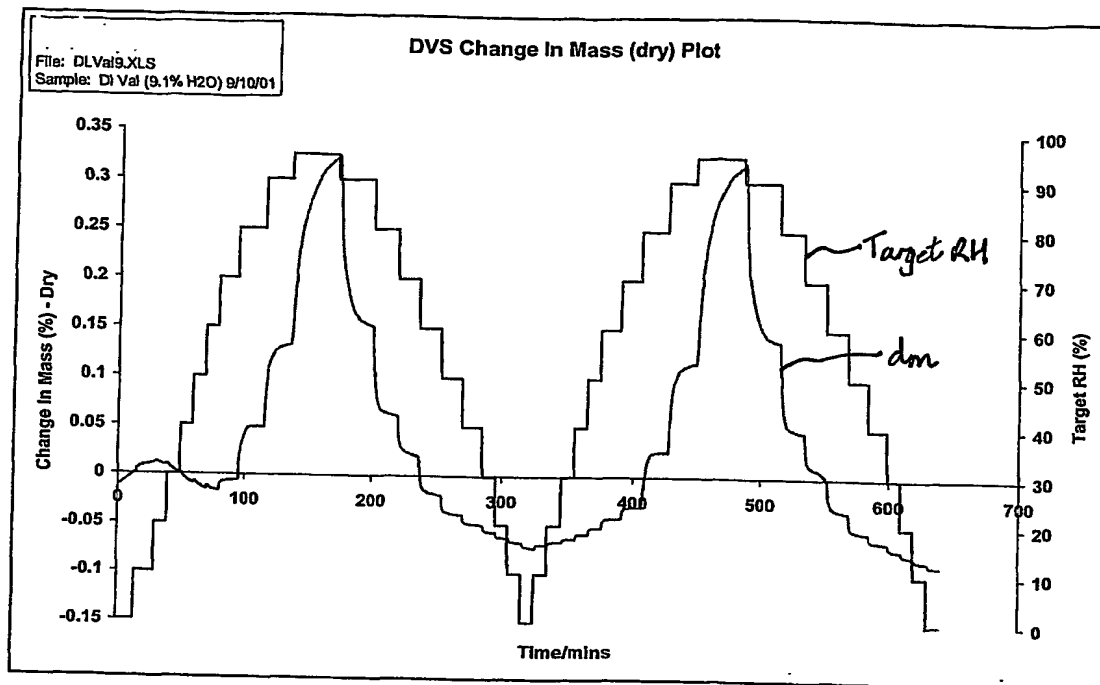


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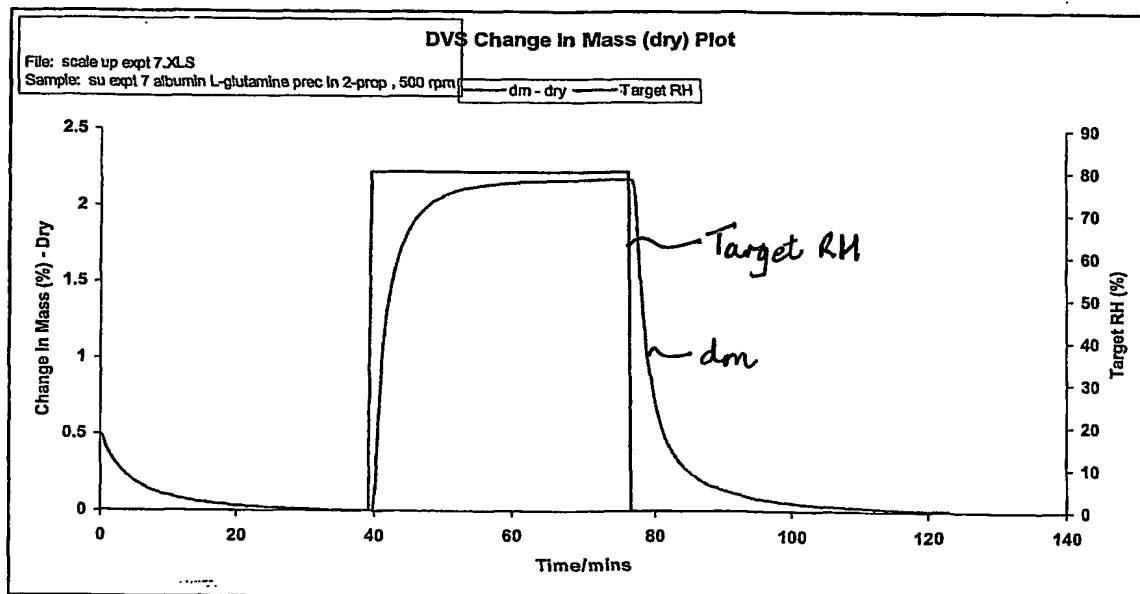


Figure 15

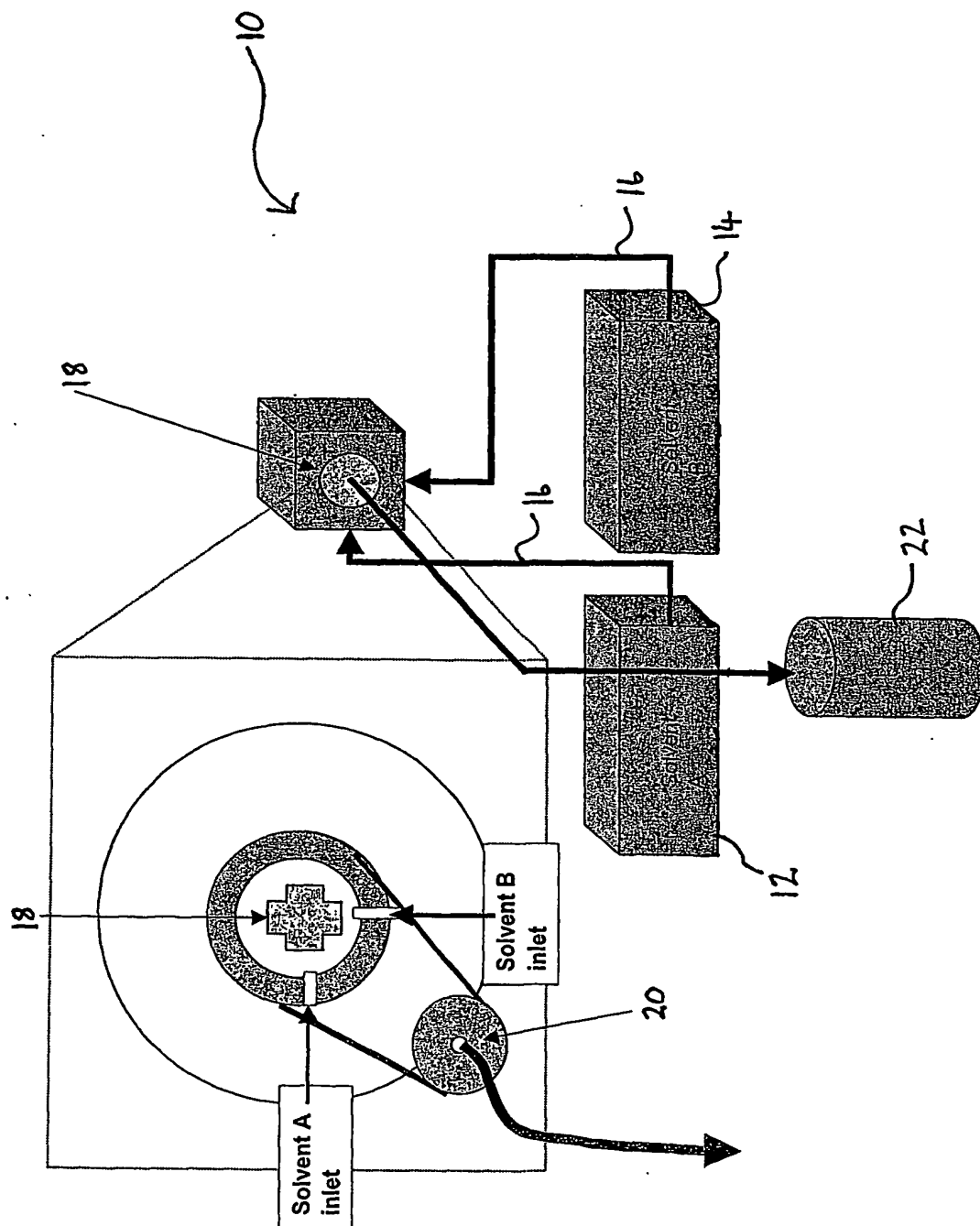
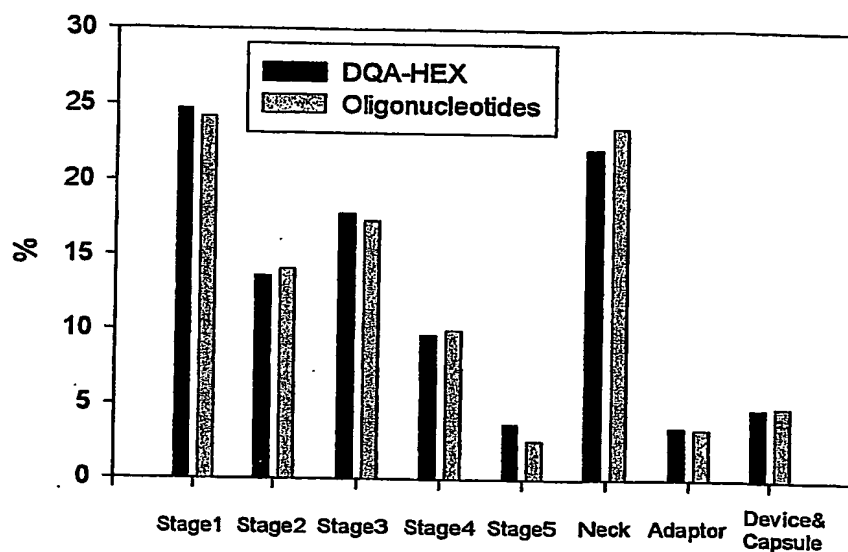


Figure 1b



Distribution of D,L valine crystals coated with a blend of DQA-HEX and crude oligonucleotides in the artificial lung. 2-PrOH was used as precipitating solvent. Loading was 18.4% (this was calculated as weight DNA measured by UV_{260nm} per weight OCMC). The fine particle fraction (FPF) was 29.9%.

Figure 17

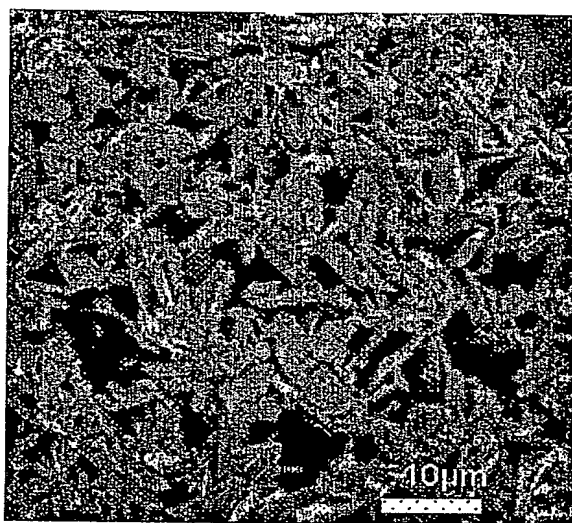


Figure 18

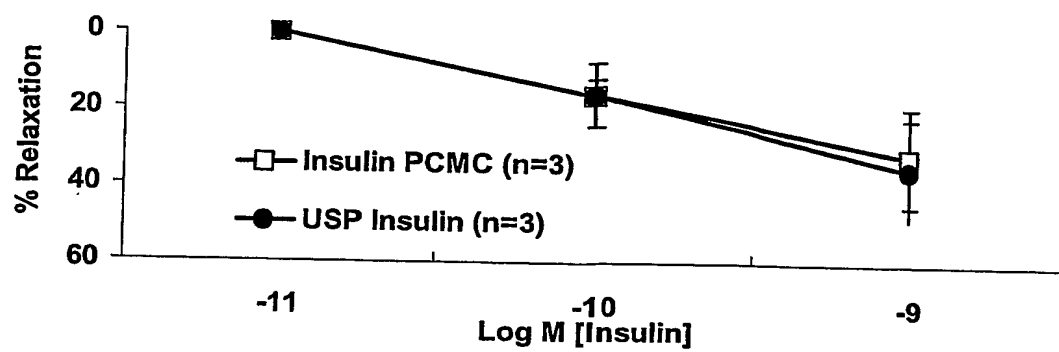


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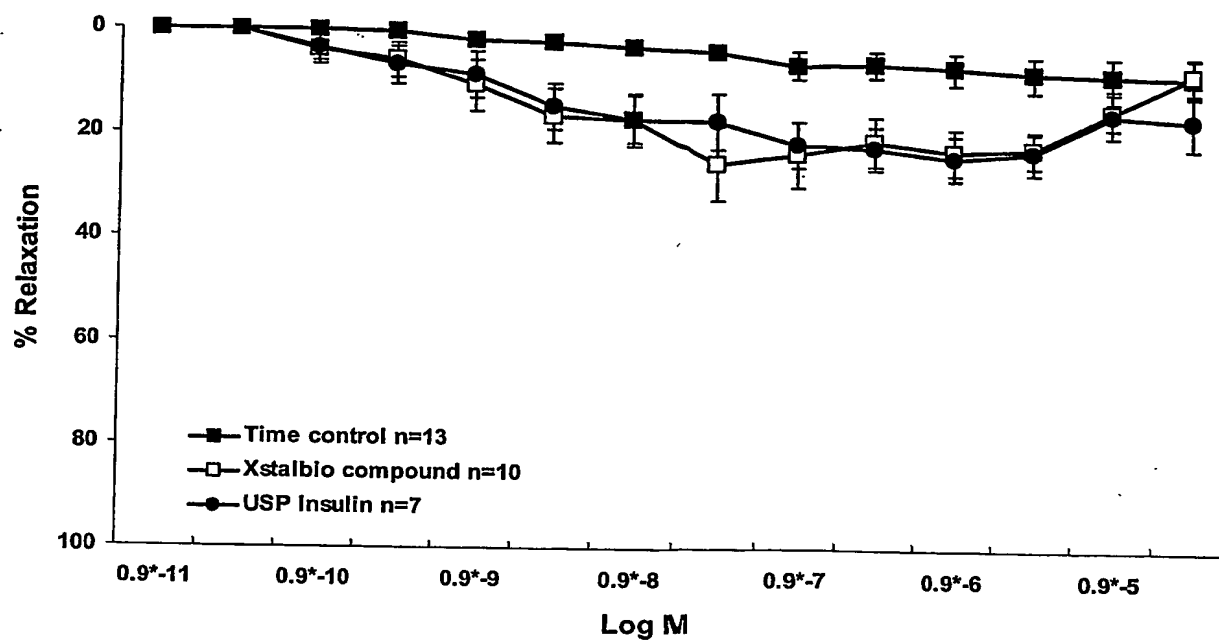


Figure 20

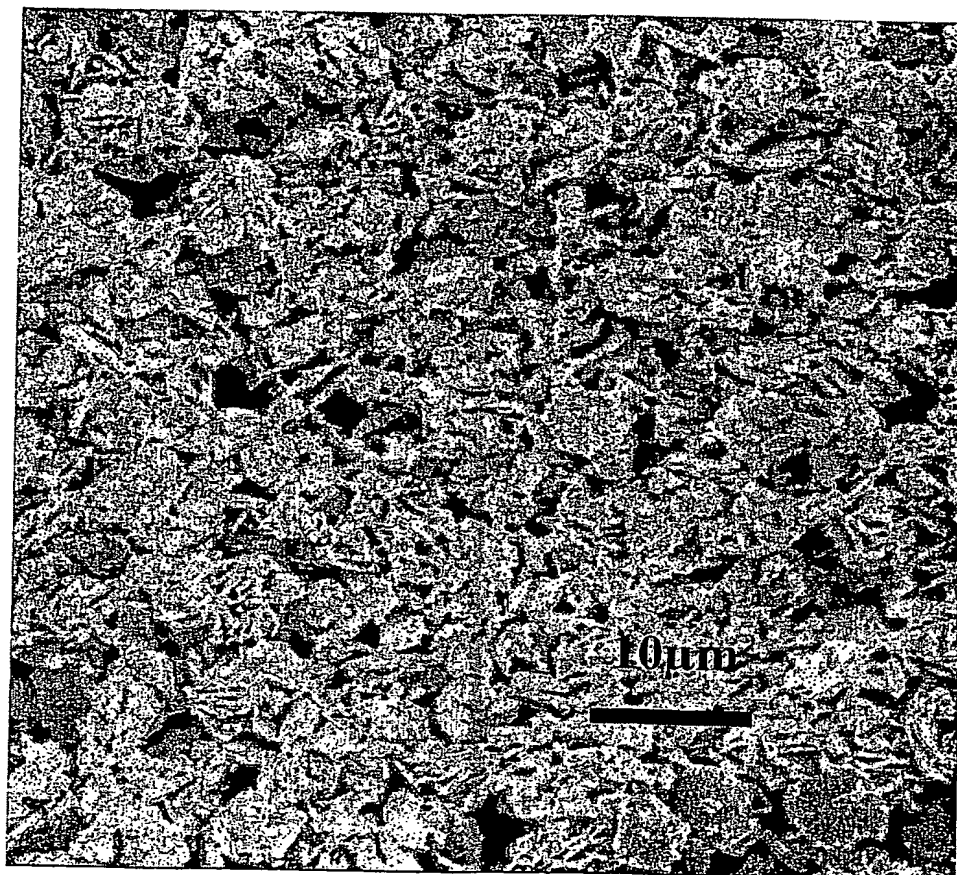


Figure 21

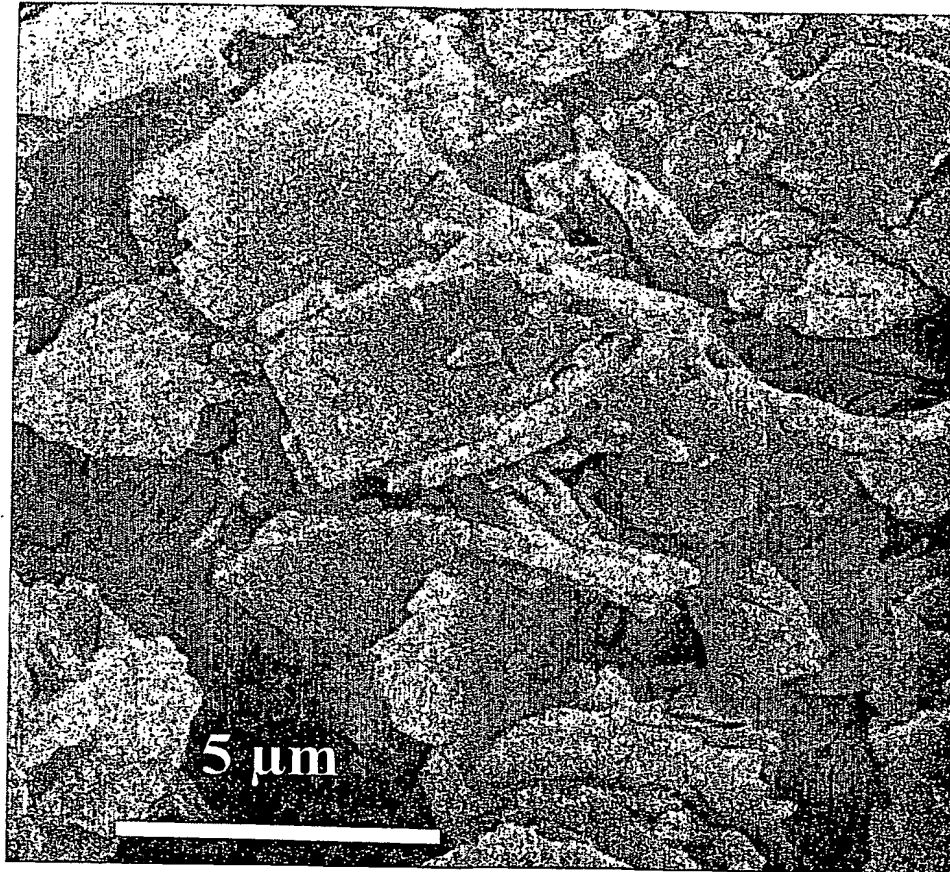


Figure 22

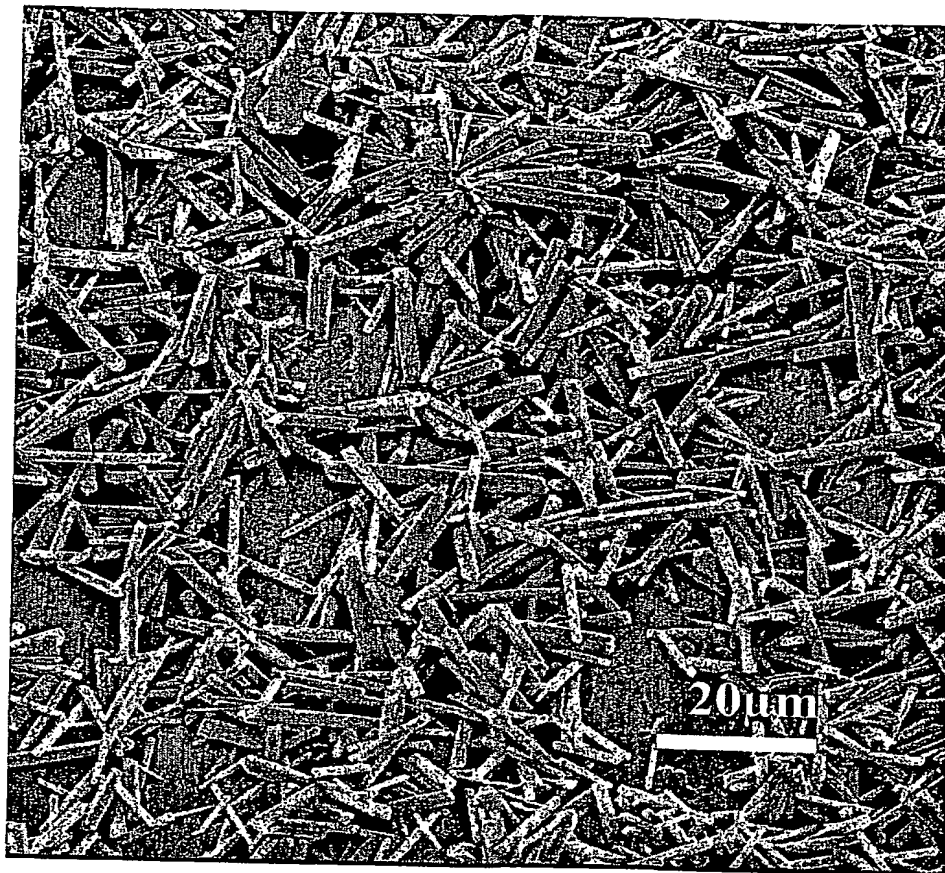


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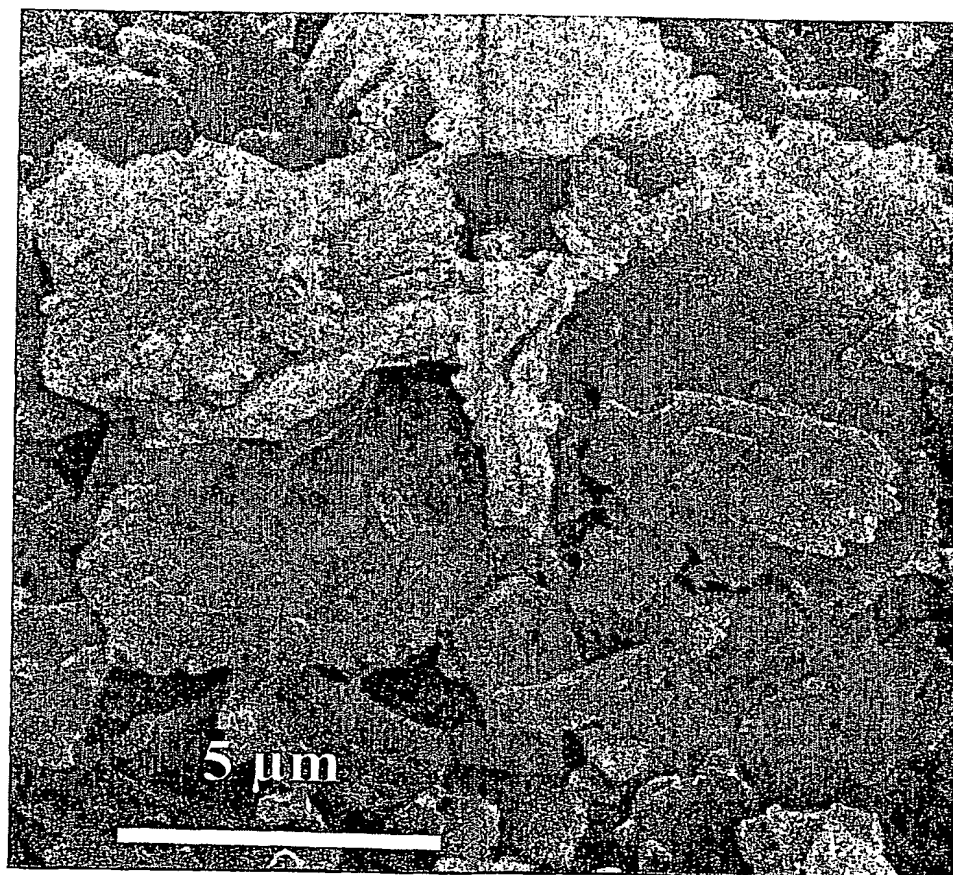


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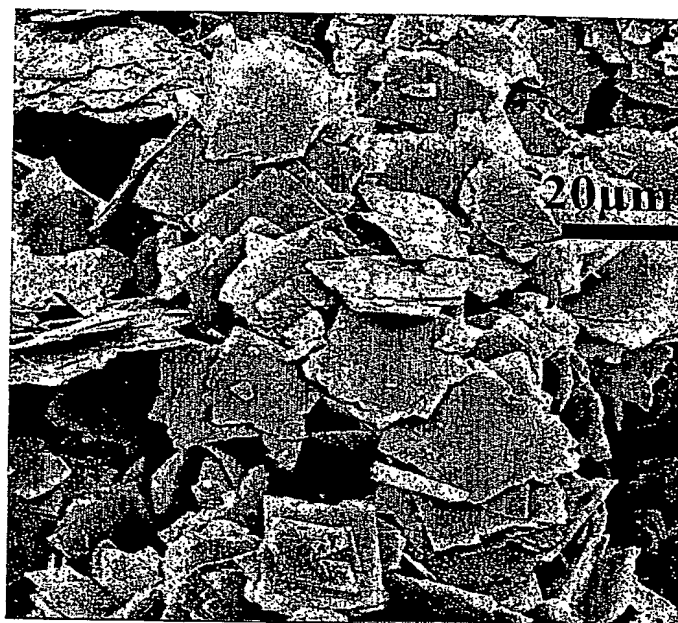
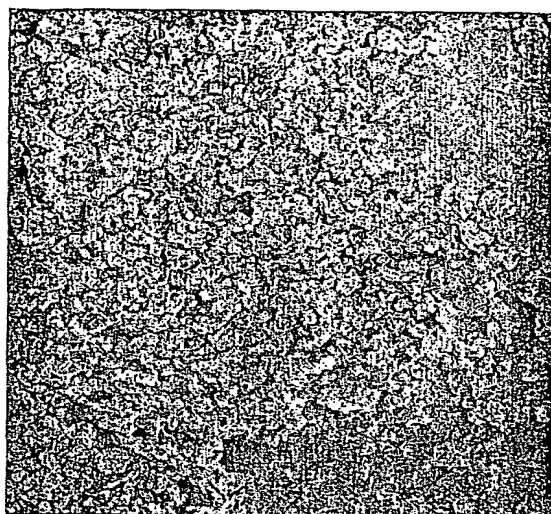


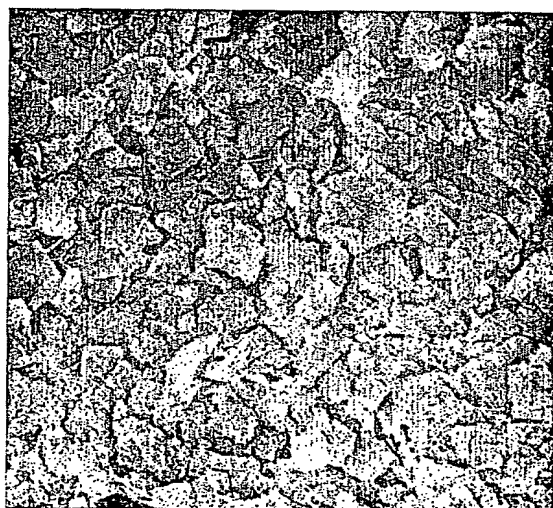
Figure 25



5μm



Figure 26



5μm



Figure 27

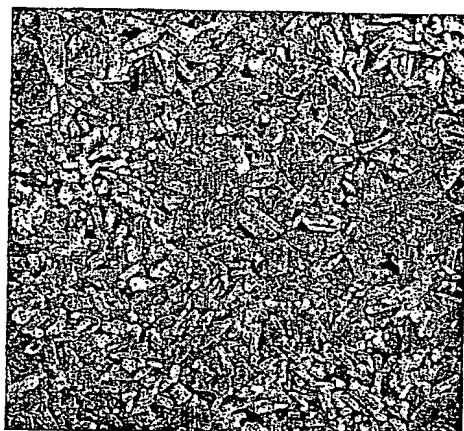


Figure 28

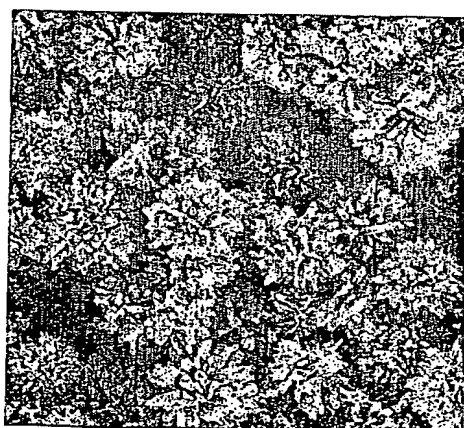


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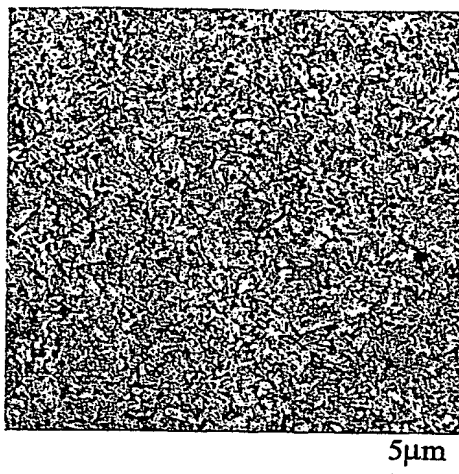


Figure 30

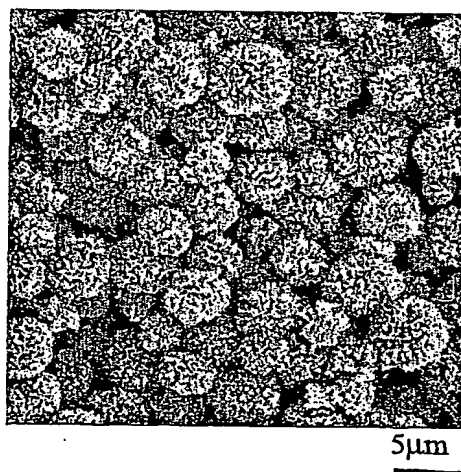


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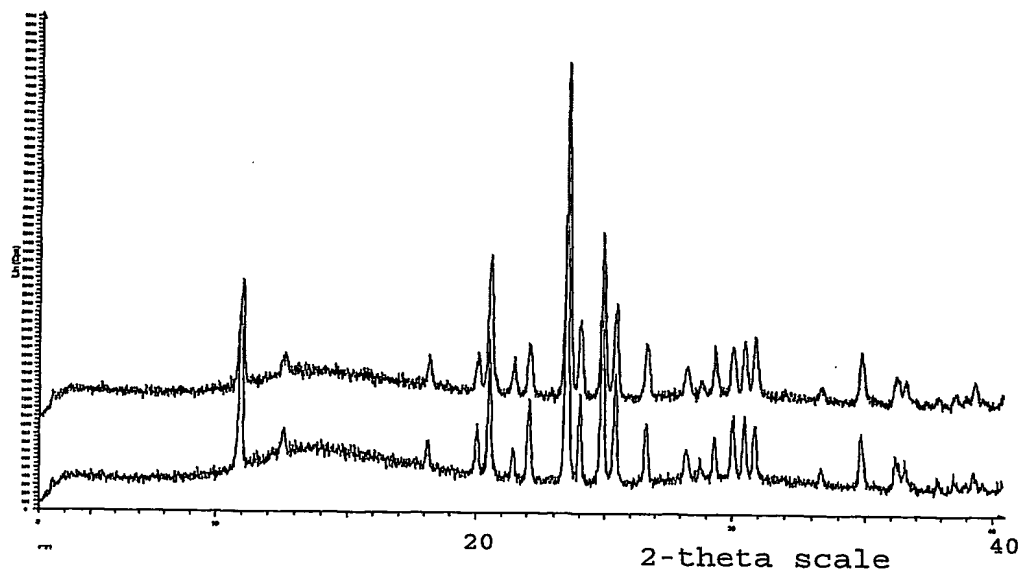


Figure 32

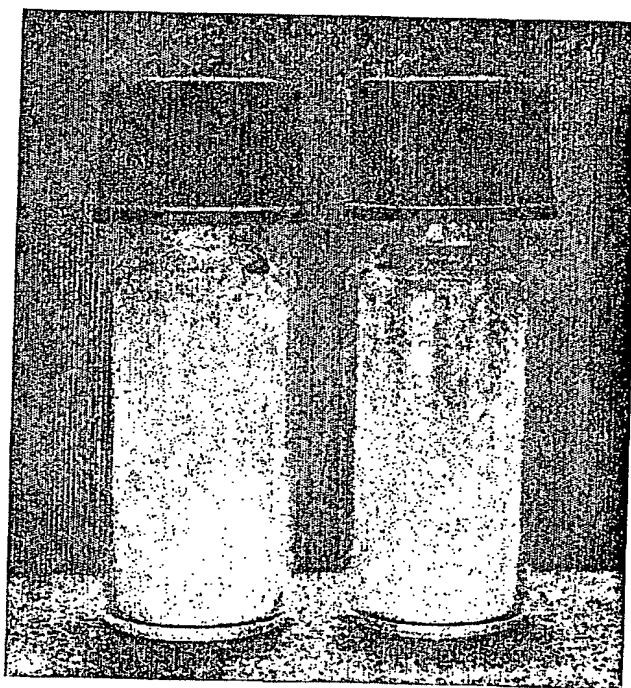


Figure 33